

## **APPENDIX I**

### **HAZARDOUS MATERIALS EMERGENCY RESPONSE GLOSSARY OF STANDARDIZED TERMS AND ACRONYMS**

## **HAZARDOUS MATERIALS EMERGENCY RESPONSE**

### **GLOSSARY OF STANDARDIZED TERMS AND ACRONYMS**

**ABATEMENT** - The actions taken to reduce the amount, degree of the hazard, or intensity of the release or threatened release of a hazardous material.

**ABSORBENT MATERIAL** - A material designed to pick up and hold liquid hazardous material to prevent contamination spread.

**ABSORPTION** - 1) The process of absorbing or “picking up” a liquid hazardous material to prevent enlargement of the contaminated area; 2) Movement of a toxicant into the circulatory system by oral, dermal, or inhalation exposure.

**ACCEPTABLE RISK** - A risk judged to be outweighed by corresponding benefits or one that is of such a degree that it is considered to pose minimal potential for adverse effects.

**ACCESS CONTROL POINT** - The point of entry and exit that regulates traffic to and from control zones.

**ACGIH** - See American Conference of Governmental Industrial Hygienists.

**ACID** - A hydrogen-containing corrosive material that reacts with water to produce hydrogen ions; a proton donor.

**ACUTE EFFECT** - An adverse action on a human or animal, generally after a single significant exposure, which may be mild or severe. (See Chronic Effect.)

**ACUTE EXPOSURE** - Exposure that is short in duration.

**ACUTE RELEASE** - Release of a hazardous material that is short in duration.

**ACUTE TOXICITY** - Any harmful effect produced by a single short-term exposure that may result in severe biological harm or death.

**ADJUVANT** - A substance used in pesticide formulation to aid its action. (Also used in the manufacture of drugs.)

**ADMINISTERING AGENCY (AA)** - The designated unit of a county or city tasked to administer the local implementation of the State and Federal hazardous material emergency planning and community right-to-know programs. Also known as Certified Uniform Program Agencies (CUPAs).

**ADSORPTION** - Process of adhering to a surface.

**AEROSOLS** - Liquid droplets, or solid particles dispersed in air, that are of fine enough particle size (0.01 to 100 microns) to remain dispersed for a period of time.

**AFTER ACTION REPORT** - A post-incident analysis report generated by a responsible party or responding agency after termination of a hazardous material incident describing actions taken, materials involved, impacts, etc.

**AGENCY SPECIFIC PLAN** - An emergency plan written by and addressing an individual agency's response actions, capabilities and resources.

**AIHA** - See American Industrial Hygiene Association.

**AIRBORNE POLLUTANTS** - Contaminants that are carried/released into the atmosphere or air.

**AIR MODELING** - Mathematical models used to predict movement and concentrations of chemicals in the atmosphere.

**AIR MONITORING** -To measure, record, and/or detect pollutants in ambient air.

**AIR PURIFYING RESPIRATORS (APR)** - Personal Protective Equipment; a breathing mask with specific chemical cartridges designed to either filter particulates or absorb contaminants before they enter the worker's breathing zone. They are intended to be used only in atmospheres where the chemical hazards and concentrations are known.

**AIR PURIFYING RESPIRATOR - POWERED** - An APR with a portable motor to force air through the filtering/purifying cartridges for use only in atmospheres where the chemical hazards and concentrations are known.

**AIR QUALITY MANAGEMENT DISTRICT** - A local/regional air pollution agency responsible for regulation and monitoring of air quality.

**ALKALI** - A hydroxide containing (-OH) corrosive material that is soluble in water, neutralizes acids, and is irritating or destructive to tissue.

**AMBIENT AIR QUALITY** - Quality of the surrounding atmosphere or circulating air.

**AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS (ACGIH)** - A professional society of persons responsible for full-time industrial hygiene programs, who are employed by official governmental units. Its primary function is to encourage the interchange of experience among governmental industrial hygienists, and to collect and make available information of value to them. ACGIH promotes standards and techniques in industrial hygiene, and coordinates governmental activities with community agencies.

**AMERICAN INDUSTRIAL HYGIENE ASSOCIATION (AIHA)** - An organization of professionals trained in the recognition and control of health hazards and the prevention of illness related thereto. It promotes the study and control of environmental factors affecting the health of industrial workers, and provides information and communication services pertaining to industrial hygiene.

**AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)** - The Institute serves as a clearinghouse for nationally coordinated voluntary safety, engineering and industrial standards developed by industrial firms, trade associations, technical societies, consumer organizations, and government agencies.

**AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)** - The Society establishes voluntary consensus standards for materials, products, systems, and services. Sponsors research projects, develops standard test methods, specifications, and recommended practices now in use.

**ANHYDROUS** - Free from water, dry.

**AREA PLAN** - A document established to facilitate emergency response to a release or threatened release of a hazardous material within a city or county. (California Health and Safety Code, Section 25503, Chapter 6.95)

**ASBESTOS** - A silicate of calcium or magnesium mineral, the friable form occurring in threadlike fibers; noncombustible and a nonconductor of electricity; a known carcinogen.

**ASBESTOSIS** - A disease of the lungs caused by the inhalation of fine airborne fibers of asbestos.

**ASPHYXIA** - A vapor or gas that can cause unconsciousness or death by suffocation (lack of oxygen).

**ASSESSMENT** - The process of determining the nature and degree of hazard of a hazardous material or hazardous materials incident.

**ASSISTING AGENCIES** - Any agency that assists the jurisdictional agency at the scene of a hazardous materials incident by providing a service or support not within the immediate responsibility or capability of the agency having jurisdiction. (Sacramento Fire Department HMRT)

**ASSOCIATION OF AMERICAN PESTICIDE CONTROL OFFICIALS, INC.** - This association consists of officials charged by law with active execution of the laws regulating the sale of economic poisons, and of deputies designated by these officials employed by State, Territorial, dominion, or Federal agencies.

**ASSOCIATION OF AMERICAN RAILROADS** - A central coordinating and research agency of the American railway industry.

**AUTHORITY HAVING JURISDICTION** - 1) Provides for the position of Incident Commander at the scene of a hazardous materials incident occurring within their jurisdictional authority boundaries. 2) The organization, office, or individual responsible for approving the equipment, an installation, or a procedure. (NFPA)

**BASE (CHEMICAL)** - A hydroxide containing (-OH) corrosive material that when in a water solution is bitter, more or less irritating, or caustic to the skin.

**BASE (ICS)** - The location at which the primary logistics functions are coordinated and administered. The ICS may be collocated with the ICP.

**BIOASSAY** - Determination of the relative strength and toxicity of a substance (such as a drug) by comparing its effect on a test organism with that of a standard preparation.

**BIOACCUMULATION** - Absorption and storage of toxic chemicals from the environment in an organism, usually in body fat.

**BIOHAZARD** - Infectious agents presenting a risk or potential risk to living organisms, either directly through infection or indirectly through disruption of the environment.

**BIOHAZARD AREA** - Any area in which work has been, or is being performed, with infectious agents or materials.

**BIOLOGICAL AGENTS** - Biological materials those are capable of causing acute or long-term damage to living organisms. (NFPA 1990, 1-3)

**BIOLOGICAL HALF-LIFE** - The time required for a living organism to eliminate half of a substance which it takes in.

**BIOLOGICAL TREATMENT** - A process by which waste is rendered less hazardous, or is reduced in volume, by relying on the action of microorganisms.

**BLASTING AGENT** - A material designed for blasting which has been tested and found to be so insensitive that there is very little probability of accidental initiation to explosion or of transition from deflagration to detonation.

**BOILING LIQUID EXPANDING VAPOR EXPLOSION (BLEVE)** - A container failure with a release of energy, often rapidly and violently, which is accompanied by a release of gas to the atmosphere and propulsion of the container or container pieces due to an overpressure rupture.

**BOOM** - A floating physical barrier serving as a continuous obstruction to the spread of a contaminant.

**BOOTIE** - A sock like over-boot protector worn to minimize contamination.

**BREAKTHROUGH TIME** - The elapsed time between initial contact of the hazardous chemical with the outside surface of a barrier, such as protective clothing material, and the time at which the chemical can be detected at the inside surface of the material.

**BREATHING ZONE AIR SAMPLE** - A sample collected in the breathing area of a worker to assess exposure to airborne contaminants.

**BUDDY SYSTEM** - A system of organizing employees into work groups in such a manner that each employee of the work group is designated to be observed by at least one other employee in the work group. [8 CCR 5192 (a)(3)]

**BUFFER ZONE** - The area of land that surrounds a hazardous waste facility on which certain usages and activities are restricted to protect the public health and safety, and the environment from existing or potential hazards caused by the migration of hazardous waste.

**BUREAU OF ALCOHOL, TOBACCO AND FIREARMS (ATF)** - The Federal bureau that enforces and administers firearms and explosive laws, as well as those covering the production, use and distribution of alcohol and tobacco products.

**BUSINESS PLAN** - A written plan and inventory developed by a business for each facility, site, or branch that provides emergency response guidelines for a release of hazardous materials meeting the requirements of H&SC 25504.

**CALIFORNIA ACCIDENTAL RELEASE PREVENTION PROGRAM (CalARP)** - The California Accidental Release Prevention (CalARP) Program is the federal Accidental Release Prevention (ARP) Program with some state specific requirements. On January 1, 1997, Chapter 6.95, Sections 25531 to 25545.3 HSC repealed statutes for California's former Risk Management and Prevention (RMPP) Program and mandated the new CalARP program.

**CALIFORNIA AIR RESOURCES BOARD (ARB)** - The State board that enforces and implements California and Federal air pollution control laws.

**CALIFORNIA DEPARTMENT OF FISH AND GAME (DFG)** - The State department which enforces provisions of the State Fish and Game Code that prohibits pollution of habitats, waters and ocean waters; and acts as the State Liaison Officer at major off highway hazardous materials incidents.

**CALIFORNIA DEPARTMENT OF FORESTRY AND FIRE PROTECTION (CDF)** - A State resources department that protects unincorporated lands from wildfire and responds to public safety emergencies.

**CALIFORNIA DEPARTMENT OF HEALTH SERVICES (DHS)** - The State department containing the Radiological Health Branch, Office of Drinking Water and Office of Risk Assessment in addition to medical and health services.

**CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL (DTSC)** - The State department responsible for regulation of storage, transport, treatment, and disposal of hazardous waste; and oversight of remediation and long-term clean up of sites contaminated with hazardous substance.

**CALIFORNIA DEPARTMENT OF TRANSPORTATION (Caltrans)** - The State department responsible for planning, designing, constructing, operating, and maintaining the State's highway system. It will ensure, in cooperation with other public and private agencies, the identification and containment of hazardous materials and restoration of orderly traffic flow. It will contract with cleanup companies to assist with cleanup.

**CALIFORNIA DIVISION OF OCCUPATIONAL SAFETY AND HEALTH (Cal/OSHA)** - The State division responsible for enforcement of worker safety laws.

**CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY (Cal/EPA)** - The State agency consisting of the Departments of Toxic Substances Control and Pesticide Regulation, the Office of Environmental Health Hazard Assessment, the Department of Water Resources and Regional Water Quality Control Boards, the Air Resources Board and the Integrated Waste Management Board. Cal/EPA sets the policy and direction that the member organizations pursue.

**CALIFORNIA FIRE MUTUAL AID PLAN** - A pre-plan agreement comprised of fire jurisdictions within the State of California to respond and assist in the event of any incident that has been determined to be outside the local fire jurisdiction's capabilities.

**CALIFORNIA HAZARDOUS MATERIALS INCIDENT REPORTING SYSTEM (CHMIRS)** - A mandatory post-incident reporting system to collect statistical data on hazardous material incidents in California. This data includes a description of the disaster, the location, the time and date, the state and local agencies responding, the actions taken by the agencies, and the agency, which had primary authority for responding to the disaster. (Chapter 6.95 of the Health and Safety Code, Title 19 CCR, and Government Code Section 8574.8 (d))

**CALIFORNIA HIGHWAY PATROL (CHP)** - The State agency with primary responsibility for traffic supervision and control on all State highways constructed as freeways, all State-owned vehicular crossings, and on most State and county highways and roadways in unincorporated areas of the State. The department enforces hazardous materials transportation laws and acts as Incident Commander, Liaison Officer, and the Statewide information, assistance, and notification coordinator for all hazardous materials incidents within its jurisdiction.

**CALIFORNIA LAW ENFORCEMENT MUTUAL AID PLAN** - Establishes the State policy for law enforcement mutual aid and outlines the procedures for coordination of alerting, dispatching, and utilization of law enforcement personnel and equipment resources.

**CALIFORNIA OFFICE OF EMERGENCY SERVICES (OES)** - The State agency responsible for administration of Health and Safety Code Chapter 6.95 and Title 19 CCR, and development of Statewide disaster response plans, and coordination of Statewide mutual aid.

**CALIFORNIA SPECIALIZED TRAINING INSTITUTE (CSTI)** - The organization within the Governor's Office of Emergency Services with the responsibility to standardize curriculum and certify instructors, students, and classes in the area of hazardous materials emergency response for the public and private sectors.

**CALIFORNIA STATE EMERGENCY PLAN** - The document established pursuant to Section 8568 of the California Government Code that addresses the State's response to extraordinary emergency situations associated with natural disasters, technological incidents, and war emergency operations.

**CALIFORNIA STATE FIRE MARSHAL (SFM)** - A division of the Department of Forestry and Fire Protection for the safety of all interstate and intrastate hazardous liquid pipelines in California.

**CANADIAN TRANSPORT EMERGENCY CENTER (CANUTEC)** - A 24 hour, government sponsored hot line for chemical emergencies (the Canadian version of CHEMTREC.)

**CARBOY** - A container, usually encased in a protective basket or crate, used to ship hazardous materials, particularly corrosives.

**CARCINOGEN** - An agent that produces or is suspected of producing cancer. (FEMA HMCP)

**CASCADE SYSTEM** - Several air cylinders attached in series to fill Self Contained Breathing Apparatus (SCBA) bottles.

**CATASTROPHIC INCIDENT** - An event that significantly exceeds the resources of a jurisdiction.

**CEASE AND DESIST ORDER** - Legal direction to stop any and all activities.

**CELSIUS (CENTIGRADE) C** - The internationally used scale for measuring temperature, in which 100o is the boiling point of water at sea level (1 atmosphere), and 0o is the freezing point.

**CENTER FOR DISEASE CONTROL (CDC)** - The federally funded research organization tasked with disease control and research.

**CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)** - The law that may require Environmental Impact Reports (EIRs) at sites where significant activities occur.

**CFR** - 1) Crash, Fire, Rescue personnel; trained in aircraft fire fighting and rescue; 2) Code of Federal Regulations; enforced by federal and state agencies and contains roles for the function of federal government.

**CGA** - See Compressed Gas Association.

**CHEMICAL ABSTRACTS SERVICE (CAS) NUMBER** - A numbering system assigned by the American Chemical Society often used by local and State hazardous materials compliance legislation for tracking chemicals in the workplace and in the community.

**CHEMICAL HAZARDS RESPONSE INFORMATION SYSTEM/HAZARD ASSESSMENT COMPUTER SYSTEM (CHRIS/HACS)** - Developed by the Coast Guard, HACS is a computerized model of the CHRIS manuals (containing chemical-specific data), and is used by Federal on-scene coordinators during a chemical spill/response.

**CHEMICAL MANUFACTURERS ASSOCIATION (CMA)** - The parent organization that operates CHEMTREC.



**CHEMICAL PROTECTIVE CLOTHING MATERIAL** - Any material or combination of materials used in an item of clothing for the purpose of isolating parts of the wearer's body from contact with a hazardous chemical. (NFPA 1991,1-3)

**CHEMICAL PROTECTIVE SUIT** - Single or multi-piece garment constructed of chemical protective clothing materials designed and configured to protect the wearer's torso, head, arms, legs, hands, and feet. (NFPA 1991, 1-3)

**CHEMICAL RESISTANCE** - The ability to resist chemical attack. The attack is dependent on the method of test and its severity is measured by determining the changes in physical properties. Time, temperature, stress, and reagent may all be factors that affect the chemical resistance of a material.

**CHEMICAL RESISTANT MATERIALS** - Materials that are specifically designed to inhibit or resist the passage of chemicals into and through the material by the processes of penetration, permeation or degradation.

**CHEMICAL TRANSPORTATION EMERGENCY CENTER (CHEMTREC)** - The Chemical Transportation Center, operated by the Chemical Manufacturers Association (CMA), can provide information and technical assistance to emergency responders. [Phone number (800) 424-9300]

**CHEMNET** - A mutual aid network of chemical shippers and contractors. It is activated when a member shipper cannot respond promptly to an incident involving chemicals. (Contact is made through CHEMTREC.)

**CHLOREP** - The chlorine emergency plan, established by the Chlorine Institute, enables the nearest producer of chlorine to respond to an incident involving chlorine. (Contact is made through CHEMTREC.)

**CHLORINE KITS** - Standardized kits commercially manufactured by contract with the Chlorine Institute to provide equipment to control or stop leaks in chlorine cylinders, tanks, and transportation tank cars.

**CHRONIC EFFECT** - Delayed or slowly developing harm resulting from a chemical exposure, which is often hard to recognize.

**CLANDESTINE LABORATORY** - An operation consisting of a sufficient combination of apparatus and chemicals that either have been or could be used in the illegal manufacture/synthesis of controlled substances.

**CLEAN AIR ACT** - A set of national standards for ambient air quality that defines the principal types and levels of pollution that should not be exceeded. This law requires States to develop "State implementation plans" for achieving the ambient air standards in each air quality control region in the State.

**CLEANUP** - Incident scene activities directed toward removing hazardous materials, contamination, debris, damaged containers, tools, dirt, water, and road surfaces in accordance with proper and legal standards, and returning the site to as near a normal state as existed prior to the incident. (Sacramento Fire Department HMRT)

**CLEANUP COMPANY (HAZARDOUS WASTE)** - A commercial business entity available for hire to specifically remove, transport, and/or dispose of hazardous wastes; and when appropriate, must meet California Highway Patrol and Department of Toxic Substances Control requirements.

**CLEANUP OPERATION** - An operation where hazardous substances are removed, contained, incinerated, neutralized, stabilized, cleared up, or in any other manner processed or handled with the ultimate goal of making the site safer for people or the environment. (8 CCR 5192(a)(3))

**CLEAN WATER ACT (CWA)** - Federal legislation to protect the nation's water and set State water quality standards for interstate navigable waters as the basis for pollution control and enforcement. The main objective is to restore and maintain the chemical, physical and biological integrity of the Nation's waters.

**COLD ZONE** - The area outside of the warm zone. Equipment and personnel are not expected to become contaminated in this area. This is the area where resources are assembled to support the hazardous materials operation.

**COLORIMETRIC TUBES** - Glass tubes containing a chemically treated substrate that reacts with specific airborne chemicals to produce a distinctive color. The tubes are calibrated to indicate approximate concentrations in air.

**COMBINED LIQUID WASTE SAMPLER (COLIWASSA)** - A tool designed to provide stratified sampling of a liquid container.

**COMBUSTIBILITY** - The ability of a substance to undergo rapid chemical combination with oxygen, with the evolution of heat.

**COMBUSTIBLE LIQUID** - Liquids with a flashpoint above 100o F. (49 CFR 173.120 (b)(2).)

**COMBUSTION PRODUCT** - By-products produced or generated during the burning or oxidation of a fuel.

**COMMAND** - The act of directing, ordering, and/or controlling resources by virtue of explicit legal, agency, or delegated authority. (NIIMS)

**COMMAND POST** - The location from which the primary command functions are executed, usually co-located with the incident base.

**COMMUNITY AWARENESS AND EMERGENCY RESPONSE (CAER)** - A program developed by the Chemical Manufacturers Association (CMA) to provide guidance for chemical plant managers to assist them in taking the initiative in cooperating with local communities developing integrated hazardous materials response plans.

**COMMUNITY RIGHT-TO-KNOW** - Legislation requiring business establishments to provide chemical inventory information to local agencies or the public.

**COMPANY (FIRE USAGE)** - Any piece of fire response equipment having a full complement of personnel. (NIIMS)

**COMPATIBILITY** - The matching of protective chemical clothing to the hazardous material involved to provide the best protection for the worker.

**COMPATIBILITY CHARTS** - Permeation and penetration data supplied by manufacturers of chemical protective clothing to indicate chemical resistance and breakthrough time of various garment materials as tested against a battery of chemicals. This test data should be in accordance with ASTM and NFPA standards.

**COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT (CERCLA)** - Known as CERCLA or SUPERFUND, it addresses hazardous substance releases into the environment and the cleanup of inactive hazardous waste sites. It also requires those who release hazardous substances, as defined by the Environmental Protection Agency (EPA), above certain levels (known as "reportable quantities") to notify the National Response Center.

**COMPRESSED GAS** - Any material or mixture having an absolute pressure exceeding 40 p.s.i. in the container at 70° F or, regardless of the pressure at 70° F, having an absolute pressure exceeding 104 p.s.i. at 130° F; or any liquid flammable material having a vapor pressure exceeding 40 p.s.i. absolute at 100° F as determined by testing. Also includes cryogenic or "refrigerated liquids" (DOT) with boiling points lower than - 130° F at 1 atmosphere.

**COMPRESSED GAS ASSOCIATION (CGA)** - An association of firms producing and distributing compressed, liquefied, and cryogenic gases; also manufacturers of related equipment. CGA submits recommendations to appropriate government agencies to improve safety standards and methods of handling, transporting, and storing gases; acts as advisor to regulatory authorities and other agencies concerned with safe handling of compressed gases; collaborates with national organizations to develop specifications and standards of safety.

**COMPUTER AIDED MANAGEMENT OF EMERGENCY OPERATIONS (CAMEO)** - A computer data base storage-retrieval system of pre-planning and emergency data for on-scene use at hazardous materials incidents.

**CONFINEMENT** - Procedures taken to keep a material in a defined or localized area.

**CONSIGNEE** - The addressee to whom the item is shipped.

**CONTACT** - Being exposed to an undesirable or unknown substance that may pose a threat to health and safety. (Sacramento Fire Department HMRT)

**CONTAINER** - Any device, in which a hazardous material is stored, transported, disposed of, or otherwise handled.

**CONTAINER, INTERMODAL, ISO** - An article of transport equipment that meets the standards of the International Organization for Standardization (ISO) designed to facilitate and optimize the carriage of goods by one or more modes of transportation without intermediate handling of the contents and equipped with features permitting ready handling and transfer from one mode to another. Containers may be fully enclosed with one or more doors, open top, tank, refrigerated, open rack, gondola, flatrack, and other designs. Included in this definition are modules or arrays that can be coupled to form an intrinsic unit regardless of intention to move single or in multiplex configurations.

**CONTAINMENT** - All activities necessary to bring the incident to a point of stabilization and to establish a degree of safety for emergency personnel greater than existed upon arrival.

**CONTAMINATION** - An uncontained substance or process that poses a threat to life, health, or the environment. (NFPA 472, sections 1-3)

**CONTAMINATION CONTROL LINE** - The established line around the contamination reduction zone that separates it from the support zone.

**CONTAMINATION REDUCTION ZONE** - Term used by the Coast Guard to identify the area of moderate hazard where threat of contamination spread to the immediate surrounding area is low. It is the area immediately outside of the inner hot zone. (See Warm Zone.)

**CONTINGENCY PLAN** - A pre-planned document presenting an organized and coordinated plan of action to limit potential pollution in case of fire, explosion, or discharge of hazardous materials; defines specific responsibilities and tasks.

**CONTROL** - The procedures, techniques, and methods used in the mitigation of a hazardous materials incident, including containment, extinguishment, and confinement.

**CONTROL ZONES** - The designation of areas at a hazardous materials incident based upon safety and the degree of hazard. (NFPA 472, sections 1-3) (See Support Zone, Warm Zone, Hot Zone, and Decontamination Corridor.)

**COORDINATION** - To bring together, in a uniform and controlled manner, the functions of all agencies on scene. (Sacramento Fire Department HMRT)

**CORROSIVE** - The ability to cause destruction of living tissue or many solid materials surfaces by chemical action.

**COST RECOVERY** - A procedure that allows for the agency having jurisdiction to pursue reimbursement for all costs associated with a hazardous materials incident. (Sacramento Fire Department HMRT)

**COUNCIL ON ENVIRONMENTAL ALTERNATIVES (CEA)** - Encourages people to conserve, rather than consume, their environment. The Council concentrates on the area of energy, and provides specific recommendations that encourage individuals to recognize and assume responsibility for environmentally sound choices available to them.

**CRYOGENIC** - Gases, usually liquefied, that induce freezing temperatures of -150° F and below (liquid oxygen, liquid helium, liquid natural gas, liquid hydrogen, etc.).

**DAMAGE ASSESSMENT** - Gathering information on the type, extent, and costs of damage after an incident.

**DAMMING** - A procedure consisting of constructing a dike or embankment to totally immobilize a flowing waterway contaminated with a liquid or solid hazardous substance. (EPA, 600/2-77-277)

**DANGEROUS WHEN WET** - A label required for water reactive materials (solid) being shipped under U.S. DOT, ICAO, and IMO regulations. A labeled material that is in contact with water or moisture may produce flammable gases. In some cases, these gases are capable of spontaneous combustion. (49 CFR 171.8)

**DECLARED EMERGENCY** - An action taken by a jurisdiction according to the California Emergency Services Act and local ordinances in response to the impact of a real or threatened hazard that exceeds local resources.

**DECONTAMINATION (DECON)** - The physical and/or chemical process of reducing and preventing the spread of contamination from persons and equipment used at a hazardous materials incident. (Also referred to as "contamination reduction".) (NFPA 472, 1-3)

**DECONTAMINATION CORRIDOR** - A distinct area within the warm zone that functions as a protective buffer and bridge between the hot zone and the cold zone, where decontamination stations and personnel are located to conduct decontamination procedures. (Sacramento Fire Department HMRT)

**DECONTAMINATION OFFICER** - A position within the FIREScope ICS HM-120 that has responsibility for identifying the decontamination corridor location & types of decontamination, assigning stations, and managing all decontamination procedures.

**DECONTAMINATION TEAM** - A group of personnel and resources operating within a decontamination corridor.

**DEGRADATION** - The loss in physical properties of an item of protective clothing due to exposure to chemicals, use, or ambient conditions.

**DELAYED TOXIC EXPOSURE EFFECT** - The condition in which symptoms of an exposure are not present immediately after the exposure, but are delayed for a relatively short period of time (such as pulmonary edema a few hours after an inhalation exposure).

**DELETERIOUS SUBSTANCES** - Substances not normally harmful to humans that may be harmful to the environment.

**DEPARTMENT OF COMMERCE (DOC)** - A Federal agency whose primary mission is to encourage, serve and promote economic development and technological advancement.

**DEPARTMENT OF Defense (DOD)** - The Federal entity that provides the military forces needed to deter war and protect the security of our country.

**DEPARTMENT OF ENERGY (DOE)** - The Federal agency which provides the framework for a comprehensive and balanced national energy plan through coordination and administration of the energy functions of the federal government; and to be responsible for long term, high risk research, development and demonstration of energy technology, the marketing of federal power, energy conservation, the nuclear weapons program, regulation of energy production and use, and a central energy data collection and analysis program.

**DEPARTMENT OF JUSTICE (DOJ)** - The Federal department which serves as counsel for the citizens of the Nation; represents them in enforcing the law in the public interest; through its thousands of lawyers, investigators, and agents it plays a key role in protection against criminals and subversion, in insuring healthy competition of business in our free enterprise system, in safeguarding the consumer, and in enforcing drug, immigration, and naturalization laws; plays a significant role in protecting citizens through its efforts for effective law enforcement, crime prevention, crime detection, and prosecution and rehabilitation of offenders; conducts all suits in the Supreme Court in which the United States is concerned; and represents the Federal Government in legal matters.

**DEPARTMENT OF LABOR (DOL)** - The purpose of the Department of Labor is to foster, promote, and develop the welfare of the wage earners of the United States, to improve their working conditions, and to advance their opportunities for profitable employment.

**DEPARTMENT OF STATE (DOS)** - This department advises the President in formulation and execution of foreign policy; promotes long-range security and well-being of the United States; determines and analyzes the facts relating to American overseas interest, makes recommendations on policy and future action, and takes the necessary steps to carry out established policy; engages in continuous consultation with the American public, the Congress, other U.S. departments and agencies, and foreign governments.

**DEPARTMENT OF TRANSPORTATION (DOT)** - This agency assures the coordinated, effective administration of the transportation programs of the Federal government and develops national transportation policies and programs conducive to the provision of fast, safe, efficient and convenient transportation at the lowest possible cost.

**DESICCANT** - A substance, such as silica gel, that removes moisture (water vapor) from the air to maintain a dry atmosphere in containers of food or chemical packaging.

## **DETECTORS -**

**Combustible Gas Indicator (CGI) Detector:** Measures the presence of a combustible gas or vapor in air.

**Corrosivity (pH) Detector:** A meter or paper that indicates the relative acidity or alkalinity of a substance, generally using an international scale of 0 (acid) through 14 (alkali-caustic). (See pH.)

**Flame Ionization Detector (FID):** A device used to determine the presence of hydrocarbons in air.

**Gas Chromatograph/ Mass Spectrometer Detector (GC/MS):** An instrument used for identifying and analyzing organics.

**Heat Detector:** An instrument used to detect heat by sensing infrared waves.

**Photoionization Detector (PID):** A device used to determine the presence of gases/vapors in low concentrations in air.

**Radiation Beta Survey Detector:** An instrument used to detect beta radiation.

**Radiation Dosimeter Detector:** An instrument that measures the amount of radiation to which a person has been exposed.

**Radiation Gamma Survey Detector:** An instrument used for the detection of ionizing radiation, principally gamma radiation, by means of a gas-filled tube.

**Temperature Detector:** An instrument, either mechanical or electronic, used to determine the temperature of ambient air, liquids, or surfaces.

**DHS -** See California Department of Health Services.

**DIKE -** An embankment or ridge, natural or man-made, used to control the movement of liquids, sludges, solids, or other materials.

**DIKE OVERFLOW -** A dike constructed in a manner that allows uncontaminated water to flow unobstructed over the dike while keeping the contaminant behind the dike.

**DIKE UNDERFLOW -** A dike constructed in a manner that allows uncontaminated water to flow unobstructed under the dike while keeping the contaminant behind the dike.

**DISPERSION -** To spread, scatter, or diffuse through air, soil, surface or ground water.

**DISPOSAL DRUM -** A reference to a specially constructed drum used to overpack damaged or leaking containers of hazardous materials for shipment.

**DIVERSION -** The intentional, controlled movement of a hazardous material to relocate it into an area where it will pose less harm to the community and the environment. (Sacramento Fire Department HMRT)

**DIVISION** - That organizational level within the ICS having responsibility for operations within a defined geographic area. The “Division” Officer directs approximately 5 Companies, and answers to the “Operations” Officer.

**DOSE** - The amount of substance ingested, absorbed, and/or inhaled per exposure period.

**DOUBLE GLOVING** - A set of gloves worn over those already in place for enhanced protection.

**DOWNWIND** - In the direction in which the wind blows.

**DUST** - Solid particles generated by handling, crushing, grinding, rapid impact, detonation, and decrepitation of organic or inorganic materials such as rock, ore, metal, coal, wood, and grain.

**ECOLOGY** - A branch of science concerned with the interrelationship of organisms and their environments.

**ECONOMIC POISON** - As defined in the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), an economic poison is “any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any insects, rodents, nematodes, fungi, or weeds, or any other forms of life declared to be pests... any substance intended for use as a plant regulator, defoliant, or desiccant.” As defined, economic poisons are generally known as pesticides.

**ECOSYSTEM** - A habitat formed by the interaction of a community of organisms with their environment.

**EDEMA** - The swelling of body tissues resulting from fluid retention.

**EMERGENCY MEDICAL SERVICES (EMS)** - Functions as required to provide emergency medical care for ill or injured persons by trained providers.

**EMERGENCY MEDICAL SERVICES AGENCY** - Plans and coordinates local public and private emergency medical services systems. Sets the local standards for medical care and transport of victims. California Health and Safety Code Section 1058 vests authority for patient care management in the most qualified medical care provider.

**EMERGENCY MEDICAL SERVICES AUTHORITY (EMSA)** - The State agency responsible for developing general guidelines for triage and handling of contaminated/exposed patients; develops and promotes hazardous materials training for emergency medical responders in the field and hospital emergency rooms; identifies and coordinates the procurement of medical assistance, supplies, and hospital beds when local and/or regional resources are depleted; and coordinates the evaluation of casualties to other areas of the State.



**EMERGENCY OPERATIONS CENTER (EOC)** - The secured site where government officials exercise centralized coordination in an emergency. The EOC serves as a resource center and coordination point for additional field assistance. It also provides executive directives to and liaison for State and federal government representatives, and considers and mandates protective actions.

**EMERGENCY OPERATIONS PLAN** - A document that identifies the available personnel, equipment, facilities, supplies, and other resources in the jurisdiction, and states the method or scheme for coordinated actions to be taken by individuals and government services in the event of natural, man-made, and attack related disasters.

**EMERGENCY RESERVE ACCOUNT FOR HAZARDOUS MATERIAL INCIDENTS** - A fund administered by the California Department of Toxic Substances Control to finance actions only for the purpose of remediation or prevention of threats of fire, explosion or human health hazards resulting from a release or potential release of a hazardous substance. (Health and Safety Code 25354)

**EMERGENCY RESPONSE** - Response to any occurrence, which has or could result in a release of a hazardous substance. (8 CCR 5192), (19 CCR 2402)

**EMERGENCY RESPONSE ORGANIZATION** - An organization that utilizes personnel trained in emergency response. (19 CCR 2402)

**EMERGENCY RESPONSE PERSONNEL** - Personnel assigned to organizations that have the responsibility for responding to different types of emergency situations. (NFPA 1991, 1-3)

**EMPTY PACKAGING** - Any packaging having a capacity of 110 gallons or less that contains only the residue of a hazardous material in table 2 of 49 CFR 172.504.

**ENDOTHERMIC** - A process or chemical reaction, which is accompanied by absorption of heat.

**ENGINE (FIRE USAGE)** - Any emergency response vehicle providing specified levels of pumping, water, hose capacity, and personnel.

**ENTRY POINT** - A specified and controlled location where access into the hot zone occurs at a hazardous materials incident.

**ENTRY TEAM LEADER** - The entry leader is responsible for the overall entry operations of assigned personnel within the hot zone. (FIREScope ICS-HM)

**ENVIRONMENTAL PROTECTION AGENCY (EPA)** - The purpose of the Environmental Protection Agency (EPA) is to protect and enhance our environment today and for future generations to the fullest extent possible under the laws enacted by Congress. The Agency's mission is to control and abate pollution in the areas of water, air, solid waste, pesticides, noise, and radiation. EPA's mandate is to mount an integrated, coordinated attack on environmental pollution in cooperation with State and local governments.

**EPA** - See Environmental Protection Agency.

**ETIOLOGICAL AGENT** - A viable microorganism or its toxin, which causes or may cause human disease.

**EVACUATION** - The removal of potentially endangered, but not yet exposed, persons from an area threatened by a hazardous materials incident. (FIREScope ICS-HM)

**EXPLOSIVE ORDNANCE DISPOSAL (EOD)** - Military or civilian bomb squads.

**EXTREMELY HAZARDOUS SUBSTANCES (EHS)** - Environmental Protection Agency (EPA) uses this term for chemicals that must be reported pursuant to SARA, Title III. The list of these substances and the threshold planning quantities are identified in 40 CFR 355. Releases of extremely hazardous substances as defined by EPA must be reported to the National Response Center. In California, the term Acutely Hazardous Material (AHM) is used. They are identical to the EHS in 40 CFR.

**EXTREMELY HAZARDOUS WASTE** - Any hazardous waste or mixture of hazardous wastes which, if human exposure should occur, may likely result in death, disabling injury or serious illness caused by the hazardous waste or mixture of hazardous wastes because of its quantity, concentration or chemical characteristics.

**EXCLUSION ZONE** - See Hot Zone.

**EXOTHERMIC** - A process or chemical reaction, which is accompanied by the evolution of heat.

**EXPLOSION-PROOF EQUIPMENT** - Instruments whose enclosure is designed and constructed to prevent the ignition of an explosive atmosphere. Certification for explosion proof performance is subject to compliance with ASTM standards.

**EXPLOSIVE** - Any chemical compound, mixture, or device, of which the primary or common purpose is to function by explosion, i.e., with substantial instantaneous release of gas and heat. (49 CFR 173.50)

**EXPOSURE** - The subjection of a person to a toxic substance or harmful physical agent through any route of entry.

**FAHRENHEIT** - The scale of temperature in which 212° is the boiling point of water at 760 mm Hg and 32° is the freezing point.

**FEDERAL INSECTICIDE, FUNGICIDE, AND RODENTICIDE ACT (FIFRA)** - An act that requires pesticides to be registered and labeled, makes it illegal to detach or destroy pesticide labels, and provides for pesticide inspections. An amendment to FIFRA now requires EPA to determine whether a pesticide "will perform its intended function without causing unreasonable adverse effects on the environment" or human health.

**FEDERAL WATER POLLUTION CONTROL ACT (WPCA)** - See Clean Water Act.

**FIBROSIS** - A condition marked by an increase of interstitial fibrous tissue.

**FILTER CANISTER** - A container filled with sorbents and catalysts that removes gases and vapors from air drawn through the unit. The canister may also contain an aerosol (particulate) filter to remove solid or liquid particles. (Air purifying canister type breathing apparatus are not approved for use during emergencies by the fire service in California.)

**FIRST RESPONDER** - The first trained person(s) to arrive at the scene of a hazardous materials incident. May be from the public or private sector of emergency services.

**FIRST RESPONDER, AWARENESS LEVEL** - Individuals who are likely to witness or discover a hazardous substance release who have been trained to initiate an emergency response sequence by notifying the proper authorities of the release. They would take no further action beyond notifying the authorities of the release. (8 CCR 5192(q)(6))

**FIRST RESPONDER, OPERATIONS LEVEL** - Individuals who respond to releases or potential releases of hazardous substances as part of the initial response to the site for the purpose of protecting nearby persons, property, or the environment from the effects of the release. They are trained to respond in a defensive fashion without actually trying to stop the release. Their function is to contain the release from a safe distance, keep it from spreading, and prevent exposures. (8 CCR 5192(q)(6))

**FLAMMABLE LIQUID** - Any liquid having a flash point below 100o F (37.8o C). (49 CFR 173.115(a))

**FLAMMABLE RANGE** - A mixture of flammable gas, as mixed with air, expressed as a percent. Each gas has a range including a lower limit and upper limit and between these limits the mixture is flammable (explosive).

**FLAMMABLE SOLID** - Any solid material, other than one classed as an explosive, which under conditions normally incident to transportation is liable to cause fires through friction, retains heat from manufacturing or processing, or which can be ignited readily and when ignited burns so vigorously and persistently as to create a serious transportation hazard. Included in this class are spontaneously combustible and water-reactive materials. (49 CFR 173.150)

**FLASHPOINT** - The minimum temperature of a liquid at which it gives off vapors sufficiently fast to form an ignitable mixture with air and will flash when subjected to an external ignition source, but will not continue to burn.

**FOOD AND DRUG ADMINISTRATION (FDA)** - Performs, directs, and coordinates detection and control activities which protect consumers against adulterated, misbranded, or falsely advertised foods, drugs, medical devices, and hazardous products.

**FULL PROTECTIVE CLOTHING** - Protective clothing worn primarily by fire fighters which includes helmet, coat, pants, boots, gloves, and self-contained breathing apparatus designed for structural fire fighting. It does not provide specialized chemical protection.

**FULLY ENCAPSULATING SUITS** - Chemical protective suits that are designed to offer full body protection, including Self Contained Breathing Apparatus (SCBA), are gas tight, and meet the design criteria as outlined in NFPA Standard 1991.

**FUME** - Airborne dispersion consisting of minute solid particles arising from the heating of a solid material such as lead, in distinction to a gas or vapor. This physical change is often accompanied by a chemical reaction, such as oxidation. Fumes flocculate and sometimes coalesce. Odorous gases and vapors should not be called fumes.

**GAS** - A state of matter in which the material has very low density and viscosity; can expand and contract greatly in response to changes in temperature and pressure; easily diffuses into other gases; readily and uniformly distributes itself throughout any container. A gas can be changed to a liquid or solid state by the combined effect of increased pressure and/or decreased temperature.

**GELLING** - A process of adding a specific material that is designed to coagulate a liquid facilitating its isolation and removal.

**GROUNDING** - Method whereby activities that may generate static electricity will be prevented from discharging a spark and thereby not produce an ignition point.

**GROUP** - Groups are established to divide the incident into functional areas of operation.

**HABITAT** - The native environment of an animal or plant; the natural place for life and growth of an animal or plant.

**HALONS** - Fire suppressing gases that are composed of straight chain carbon atoms with a variety of halogen atoms attached.

**HALOGENS** - A chemical family that includes fluorine, chlorine, bromine, and iodine.

**HAZARD** - Any situation that has the potential for causing damage to life, property, and/or the environment.

**HAZARD CLASS** - The classification of hazardous materials as categorized and defined by the Department of Transportation in 49 CFR. The Hazardous Materials Table (49 CFR Part 172.101) designates specific materials as hazardous for the purpose of transportation. It also classifies each material and specifies requirements pertaining to its packaging, labeling, and transportation.

**Class 1: Explosives**

- Division 1.1 Explosives with a mass explosion hazard
- Division 1.2 Explosives with a projection hazard
- Division 1.3 Explosives with predominantly a fire hazard
- Division 1.4 Explosives with no significant blast hazard
- Division 1.5 Very insensitive explosives
- Division 1.6 Extremely insensitive explosive articles

**Class 2: Gases**

- Division 2.1 Flammable gases
- Division 2.2 Nonflammable gases
- Division 2.3 Poison gas
- Division 2.4 Corrosive gases

**Class 3: Flammable liquids**

- Division 3.1 Flashpoint below -18°C (0°F)
- Division 3.2 Flashpoint -18°C and above, but less than 23°C (73°F)
- Division 3.3 Flashpoint 23°C and up to 61°C (141°F)

**Class 4: Flammable solids; spontaneously combustible materials; & materials that are dangerous when wet**

- Division 4.1 Flammable solids
- Division 4.2 Spontaneously combustible materials
- Division 4.3 Materials that are dangerous when wet

**Class 5: Oxidizers and organic peroxides**

- Division 5.1 Oxidizers
- Division 5.2 Organic peroxides

**Class 6: Poisons and etiologic materials**

- Division 6.1 Poisonous materials
- Division 6.2 Etiologic (infectious) materials

**Class 7: Radioactive materials**

Any material, or combination of materials, that spontaneously gives off ionizing radiation. It has a specific activity greater than 0.002 microcuries per gram.

**Class 8: Corrosives**

A material, liquid, or solid that causes visible destruction or irreversible alteration to human skin or a liquid that has a severe corrosion rate on steel or aluminum.

**Class 9: Miscellaneous**

A material which presents a hazard during transport, but which is not included in any other hazard class (such as a hazardous substance or a hazardous waste).

**ORM-D: Other regulated material**

A material, which, although otherwise subjected to regulations, presents a limited hazard during transportation due to its form, quantity and packaging.

**HAZARDOUS AIR POLLUTANT** - An airborne pollutant that may cause or contribute to an increase in mortality or serious illness.

**HAZARDOUS CHEMICAL** - A term used by the United States Occupational Safety and Health Administration (OSHA) to denote any chemical that would be a risk to employees if exposed in the workplace. The list of hazardous chemicals is found in 29 CFR.

**HAZARDOUS MATERIAL (HAZARDOUS MATERIALS)** - A substance or combination of substances which, because of quantity, concentration, physical, chemical or infectious characteristics may cause, or significantly contribute to an increase in deaths or serious illness; and/or pose a substantial present or potential hazard to humans or the environment.

**HAZARDOUS MATERIAL CATEGORIZATION (HAZCAT)** - A field analysis process to determine basic hazardous materials hazard classification and some chemical and physical properties of unknowns.

**HAZARDOUS MATERIALS EMERGENCY** - The release or threatened release of a hazardous material that may impact the public health, safety and/or the environment.

**HAZARDOUS MATERIAL INCIDENT CONTINGENCY PLAN (HMICP)** - The State's hazardous materials emergency plan published by OES from 1991 to 2004 pursuant to Government Code §8574.17.

**HAZARDOUS MATERIALS INCIDENT TOOL KIT (TOOL KIT)** - The reference document born from the split of the HMICP and the STDCP.

**HAZARDOUS MATERIALS RESPONSE TEAM (HMRT)** - An organized group of employees, designated by the employer, who are expected to perform work to handle and control actual or potential leaks or spills of hazardous substances requiring possible close approach to the substance. A Hazardous materials Team may be a separate component of a fire brigade or a fire department or other appropriately trained and equipped units from public or private agencies.

**HAZARDOUS MATERIALS RESPONSE TEAM -- TECHNICIAN LEVEL** - Consists of an organized group of employees, designated by the employer in compliance with 8 CCR 5192(q)(6), trained to function at the hazardous materials incident at the Technician Level in accordance with NFPA 472, Chapter 3 (1990). Additionally, personnel on the team are capable of the following:

The ability to carry out the duties of these positions as identified in FIREScope ICS-HM-120:

- a. Group Supervisor
- b. Entry Leader
- c. Hazardous Material Safety Officer
- d. Site Access Control Officer
- e. Decontamination Leader
- f. Technical Specialist-Hazardous Material Reference

*Note: Multiple positions can be handled by one person dependent upon the complexity and/or severity of the incident.*

Members are assigned positions in accordance with 8 CCR 5192 appropriately trained to include but not be limited to entry with splash protective clothing:

- a. Entry Team - 2
- b. Backup Team – 2

**HAZARDOUS MATERIALS RESPONSE TEAM -- SPECIALIST LEVEL** - Consists of an organized group of employees, designated by the employer in compliance with 8 CCR 5192(q)(6), trained to function at the hazardous materials incident at the Specialist Level in accordance with NFPA Standard 472, Chapter 4 (1990). Additionally, personnel on the team are capable of the following:

The ability to carry out the duties of these positions as identified in FIREScope ICS-HM-120:

- a. Group Leader
- b. Entry Team Leader
- c. Hazardous Material Safety Officer
- d. Site Access Control Officer
- e. Decontamination Leader
- f. Technical Specialist-Hazardous Material Reference

*Note: Multiple positions can be handled by one person dependent upon the complexity and/or severity of the incident.*

Members are assigned positions in accordance with 8 CCR 5192 appropriately trained for entry with vapor protective clothing:

- a. Entry Team - 2
- b. Backup Team – 2

**HAZARDOUS MATERIALS RESPONSE TEAM -- SPECIALTY** - Consists of an organized group of employees, designated by the employer in compliance with 8 CCR 5192(q)(6), who are trained in the hazards of specific hazardous substances, and/or specific techniques or support services, and/or the provision of specialized technical advice and assistance in compliance with 8 CCR 5192(q)(5). The Team is capable, either within their own team or in agreement with a Hazardous Materials Response Team on scene, of the following:

The ability to carry out the duties of these positions as identified in FIREScope ICS-HM-120:

- a. Group Supervisor
- b. Entry Team Leader
- c. Hazardous Material Safety Officer
- d. Site Access Control Officer
- e. Decontamination Leader
- f. Technical Specialist-Hazardous Material Reference

*Note: Multiple positions can be handled by one person dependent upon the complexity and/or severity of the incident.*

Members are assigned positions in accordance with 8 CCR 5192 appropriately trained to include but not be limited to entry with splash protection:

- a. Entry team - 2
- b. Backup team – 2

**HAZARDOUS SUBSTANCE** - Hazardous Substance, as used by the California Department of Toxic Substances Control, encompasses every chemical regulated by both the Department of Transportation (hazardous materials) and the Environmental Protection Agency (hazardous waste), including emergency response (8 CCR 5192).

**HAZARDOUS WASTE** - 1) Waste materials or mixtures of waste which require special handling and disposal because of their potential to damage health and/or the environment; 2) The Environmental Protection Agency uses the term hazardous waste for chemicals that are regulated under the Resource Conservation and Recovery Act and are listed in 40 CFR 261.33 (d). Environmental Protection Agency or California Department of Toxic Substances Control regulated hazardous waste, when in transport, must also meet 49 CFR parts 170 through 179.

**HAZARDOUS WASTE LEACHATE** - Any liquid that has percolated through or drained from hazardous waste placed in or on the ground.

**HAZARDOUS WASTE MANAGEMENT DECONTAMINATION LEADER** - Systematic control of the collection, source separation, storage, transportation, processing, treatment, recovery, and disposal of hazardous wastes. (ICS-HM-222-3)

Reports to the Hazardous Materials Group Supervisor. The Decontamination Leader is responsible for the operations of the decontamination element, providing decontamination as required by the Incident Action Plan.



**HAZARDOUS WASTE MANIFEST, UNIFORM** - • Review Common Responsibilities.

The shipping document, originated and signed by the waste generator or an authorized representative, that contains the information required by law and must accompany shipments of hazardous waste. (40 CFR 262, Subpart B) • Establish the Contamination Reduction Corridor(s). Identify contaminated people and equipment.

**HAZARDOUS WASTE SITE** - Maintain control of movement of people and equipment within the Contamination Reduction Zone. A location where hazardous wastes are located, and there is either a threat of a release or an actual release of these wastes which may have an adverse effect on public health or the environment. • Maintain communications and coordinate operations with the Entry Leader. Maintain communications and coordinate operations with the Site Access Control Leader and the Safe Refuge Area Manager (if activated).

**HEALTH HAZARD, CHEMICAL** - Coordinate handling, storage, and transfer of contaminants within the Contamination Reduction Zone. Any chemical or chemical mixture, whose physical or chemical properties may cause acute or chronic health effects [8 CCR 5192 (a)(3)]. • Maintain Unit/Activity Log (ICS Form 214).

**HEAVY METAL** - A high-density metallic element that may demonstrate health hazards as a result of exposure and may contribute to contamination of the environment. This includes chromium (Cr), beryllium (Be), lead (Pb), mercury (Hg), zinc (Zn), copper (Cu), cadmium (Cd) and others.

**HEPATOTOXIC** - A substance that negatively affects the liver. An agricultural chemical intended for killing plants or interrupting their normal growth. (See Pesticides.)

**HIGH PERFORMANCE LIQUID CHROMATOGRAPHY (HPLC)** - A procedure used in organics analysis to separate chemical mixtures based on differential ionic absorption to various substrates.

**HOT TAPPING** - A sophisticated method of welding on and the cutting of holes through liquid, compressed gas vessels, and piping for the purpose of relieving pressure and/or removing product.

**HOT ZONE** - An area immediately surrounding a hazardous materials incident, which extends far enough to prevent adverse effects from hazardous materials releases to personnel outside the zone. This zone is also referred to as the "exclusion zone", the "red zone", and the "restricted zone" in other documents. (NFPA 472, 1-3)

**HAZARDOUS MATERIALS TRANSPORTATION ACT (HMTA)** - The Hazardous Materials Transportation Act of 1975 (HMTA), is the major transportation-related statute affecting transportation of hazardous cargoes. Regulations apply to ". . . any person who transports, or causes to be transported or shipped, a hazardous material; or who manufactures, fabricates, marks, maintains, reconditions, repairs, or tests a package or container which is represented, marked, certified, or sold by such person for use in the transportation in commerce of certain hazardous materials."

**HYGROSCOPIC** - A substance that has the property of absorbing moisture from the air, such as silica gel.

**HYPERGOLIC** - Two chemical substances that spontaneously ignite upon mixing.

**IGNITABLE MATERIAL** - Any material having, as a liquid, a flash point less than 140o F or, if not a liquid, is capable of causing fire through friction, absorption of moisture or spontaneous chemical changes.

**IGNITION TEMPERATURE** - The minimum temperature at which a material will initiate or maintain combustion.

**IMMEDIATELY DANGEROUS TO LIFE OR HEALTH (IDLH)** - An atmospheric concentration of any toxic, corrosive or asphyxiant substance that poses an immediate threat to life or would cause irreversible or delayed adverse health effects or would interfere with an individual's ability to escape from a dangerous atmosphere. (8 CCR 5192(a)3)

**INFORMATION OFFICER (IO)** - The individual assigned to act as the liaison between the Incident Commander and the news media, as well as other groups.

**INCIDENT** - An event involving a hazardous material or a release or potential release of a hazardous material.

**INCIDENT ACTION PLAN (IAP)** - A plan developed at the field response level that contains objectives reflecting the overall incident strategy and specific tactical actions and supporting information for the next operational period. The plan may be oral or written.

**INCIDENT COMMAND** - A disciplined method of management established for the specific purpose of control and direction of resources and personnel.

**INCIDENT COMMANDER (IC)** - The individual responsible for overall management of the incident at the field level.

**INCIDENT COMMAND POST** - See Command Post.

**INCIDENT COMMAND SYSTEM (ICS)** - The combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure, with responsibility for the management of resources to effectively accomplish stated objectives pertinent to an incident.

**INCOMPATIBLE WASTE** - Waste unsuitable for commingling with another waste or material.

**INDUSTRIAL WASTES** - Unwanted materials produced in or eliminated from an industrial operation.

**INFECTIOUS WASTE** - Waste containing pathogens; may consist of tissues, organs, body parts, blood, and body fluids.

**INGESTION** - The process of taking substances such as food, drink, and medicine into the body through the mouth.

**INHIBITOR** - A chemical added to another substance to prevent or slow down an unwanted or sudden occurrence of chemical change.

**INORGANIC COMPOUNDS** - Chemical compounds that do not contain the element carbon with the exception of carbon oxides and carbon sulfides.

**INSECTICIDE** - A chemical product used to kill and control insects. (See Pesticides.)

**INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA)** - An association of air carriers that develop guidelines for transportation of cargo.

**INTERNATIONAL CIVIL AVIATION ORGANIZATION (ICAO)** - An organization that develops the principles and techniques of international air navigation and fosters the planning and development of international air transport so as to insure safe and orderly growth.

**INVESTIGATE** - To systematically search or inquire into the particulars of an incident, and collect the necessary evidence to seek criminal and/or civil prosecution.

**IRRITANT** - A material that has an anesthetic, irritating, noxious, toxic, or other similar property that can cause extreme annoyance or discomfort. (49 CFR)

**ISOLATING THE SCENE** - Preventing persons and equipment from becoming exposed to a release or threatened release of a hazardous material by the establishment of site control zones.

**JURISDICTION SPECIFIC PLAN** - A plan that details emergency activities, capabilities, responsibilities and resources within an area, agency, facility or political subdivision.

**LABPACK** - Putting multiple small containers of chemicals with compatible chemical characteristics in a disposal drum with absorbent material.

**LACRIMATION** - Tearing produced by eye irritation.

**LC50 (lethal concentration, 50%)** - The amount of a toxicant in air that is deadly to 50% of the exposed lab animal population within a specified time.

**LD50 (lethal dose, 50%)** - The amount of a toxicant administered by other than inhalation which is deadly to 50% of the exposed lab animal population within a specified time.

**LEAK** - The uncontrolled release of a hazardous material that could pose a threat to health, safety, and/or the environment.

**LEAK CONTROL COMPOUNDS** - Substances used for the plugging and patching of leaks in non-pressure containers.

**LEAK CONTROL DEVICES** - Tools and equipment used for the plugging and patching of leaks in non-pressure and some low-pressure containers, pipes, and tanks.

**LEVEL OF PROTECTION** - In addition to appropriate respiratory protection, designations of types of personal protective equipment to be worn based on NFPA standards.

- **Level A** - Vapor protective suit for hazardous chemical emergencies.
- **Level B** - Liquid splash protective suit for hazardous chemical emergencies.
- **Level C** - Limited use protective suit for hazardous chemical emergencies.

**Level One Incident :**

Hazardous materials incidents which can be correctly contained, extinguished, and/or abated utilizing equipment, supplies, and resources immediately available to first responders having jurisdiction, and whose qualifications are limited to and do not exceed the scope of training as explained in 8 CCR 5192, or California Government Code (CGC), Chapter 1503, with reference to “First Responder, Operational Level”.

**Level Two Incident:**

Hazardous materials incidents which can only be identified, tested, sampled, contained, extinguished, and/or abated utilizing the resources of a Hazardous Materials Response Team, which requires the use of specialized chemical protective clothing, and whose qualifications are explained in 8 CCR 5192, or California Government Code (CGC), Chapter 1503, with reference to “Hazardous Materials Technician Level”.

**Level Three Incident :**

A hazardous materials incident which is beyond the controlling capabilities of a Hazardous Materials Response Team (Technician or Specialist Level) whose qualifications are explained in 8 CCR 5192, or California Government Code, Chapter 1503; and/or requires the use of two or more Hazardous Materials Response Teams; and/or must be additionally assisted by qualified specialty teams or individuals.

**LOCAL DISASTER PLAN** - A plan developed and used by local government for extraordinary events.

**LOCAL EMERGENCY PLANNING COMMITTEE (LEPC)** - A committee appointed by a State emergency response commission, as required by SARA Title III, to formulate a comprehensive emergency plan for its corresponding Office of Emergency Services mutual aid region.

**LOCAL GOVERNMENT** - Local agencies as defined in Government Code § 8680.2 and special districts as defined in California Code of Regulations, Title 19 Division 2, Chapter 5, CDAA, § 2900 (y).

**LOCALIZED EXPOSURE** - Contact with a limited area, usually an external body surface.

**LOGISTICS CHIEF** - That organizational position within the ICS having responsibility for summoning and managing support, apparatus, equipment and personnel.

**LOWER EXPLOSIVE LIMIT (LEL)** - The lowest concentration of the material in air that can be detonated by spark, shock, or fire, etc.

**MACROENCAPSULATION** - The isolation of a waste by embedding it in, or surrounding it with, a material that acts as a barrier to water or air (e.g., clay and plastic liners).

**MANIFEST, UNIFORM HAZARDOUS WASTE** - A document required by 40 CFR 262 to accompany any shipment of hazardous waste from the point of generation to the point of final disposal/destruction. (See Shipping Papers and Hazardous Waste Manifest, Uniform)

**MARKING** - The required descriptive name, instructions, cautions, weight, or specifications or combination thereof on containers of hazardous materials/hazardous waste.

**MATERIAL SAFETY DATA SHEET (MSDS)** - A document which contains information regarding the specific identity of hazardous chemicals, including information on health effects, first aid, chemical and physical properties, and emergency phone numbers.

**MELTING POINT** - The temperature at which a material changes from a solid to a liquid.

**MICROORGANISM** - A living organism not discretely visible to the unaided eye.

**MIDNIGHT DUMPING** - Illegal disposal of hazardous materials.

**MIST** - Suspended liquid droplets generated by condensation from the gaseous to the liquid state or by breaking up a liquid into a dispersed state, such as by splashing, foaming, or atomizing. A mist is formed when a finely divided liquid is suspended in air.

**MITIGATION** - Any action employed to contain, reduce, or eliminate the harmful effects of a spill or release of a hazardous material.

**MONITORING** - The act of systematically checking to determine contaminant levels and atmospheric conditions.

**MONITORING ENVIRONMENTAL CONTAMINATION** - Use of instruments and other techniques to determine the presence or levels of hazardous materials.

**MONITORING EQUIPMENT** - Instruments and devices used to identify, qualify, and/or quantify contaminants.

**MUTAGEN** - A substance capable of causing genetic damage.

**MUTUAL AID** - An agreement to supply, if available, specifically agreed upon aid or support in an emergency situation between two or more agencies, jurisdictions, or political sub-divisions without the expectation of reimbursement.

**NARCOSIS** - Stupor or unconsciousness produced by chemical substances.

**NATIONAL CONTINGENCY PLAN (NCP)** - Created by CERCLA to define the federal response authority and responsibility for oil and hazardous material spills.

**NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)** - An international voluntary membership organization to promote improved fire protection and prevention, establish safeguards against loss of life and property by fire, and writes and publishes the American National Standards.

**NATIONAL INTERAGENCY INCIDENT MANAGEMENT SYSTEM (NIIMS)** - A standardized systems approach to incident management that consists of five major sub-divisions collectively providing a total systems approach to all-risk incident management.

**NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH (NIOSH)** - A Federal agency, which, among other activities, tests and certifies respiratory protective devices, air-sampling detector tubes, and recommends occupational exposure limits for various substances.

**NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA)** - The agency responsible to serve as scientific support coordinator for a federal on scene coordinator. Assists in oil spill and air toxics modeling and meteorological monitoring and oceanic research.

**NATIONAL PESTICIDE TELECOMMUNICATIONS NETWORK (NPTN)** - The 24-hour national hotline (800) 858-PEST operated by the Texas Tech University School of Medicine providing toll-free information about pesticide safety, application, chemistry and toxicology to callers in the U.S., Puerto Rico, and the Virgin Islands. Questions are answered directly or via next day mail.

**NATIONAL RESPONSE CENTER (NRC)** - A communications center operated by the United States Coast Guard headquarters located in Washington, DC. They provide information on suggested technical emergency actions, and must be notified by the spiller within 24 hours of any spill of a reportable quantity of a hazardous substance.

**NECROSIS** - Death in a particular part of a living tissue.

**NEPHROTOXIC** - A substance that negatively affects the kidneys.

**NEUROTOXIC** - A substance that negatively affects the nervous system.

**NEUTRALIZATION** - The process by which acid or alkaline properties of a solution are altered by addition of certain reagents to bring the hydrogen and hydroxide concentrations to equal value (pH 7 is neutral).

**NON-FLAMMABLE GAS** - Any material or mixture, in a cylinder or tank, other than poison or flammable gas, having an absolute pressure in the container exceeding 40 p.s.i at 70° F, or having an absolute pressure exceeding 104 p.s.i at 130° F. (49 CFR)

**NORTH AMERICAN (NA) IDENTIFICATION NUMBER** - A four-digit number, preceded by "NA", used in the United States and Canada to identify a hazardous material or group of hazardous materials in transportation.

**NOT OTHERWISE SPECIFIED (NOS or n.o.s.)** - In shipping regulations, the term is used for classes of substances to which restrictions apply, but for which the individual members of the class are not listed in the regulations.

**OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)** - Component of the United States Department of Labor; an agency with safety and health regulatory and enforcement authorities for most United States industries, businesses and States.

**ODOR THRESHOLD** - The lowest concentration in the atmosphere that can be detected by the human sense of smell. Often a poor indicator of toxicity risk.

**OFFICE OF HAZARDOUS MATERIALS SAFETY (OHMS)** - A Federal agency tasked with the research and recommended revisions to 49 CFR.

**OIL** - Any of numerous mineral, vegetable, and synthetic substances and vegetable and animal fats those are generally slippery, combustible, viscous, liquid or liquefiable at room temperature.

**OIL SPILL CLEANUP AGENT** - Any material used in removing oil from the environment, including inert sorbent materials, approved chemical dispersants, surface collecting agents, sinking agents, and biological additives.

**OLFACTORY** - Pertaining to the sense of smell.

**ON-SCENE COORDINATOR (OSC)** - As explained in the National Contingency Plan, it is the pre-designated Federal official who coordinates Federal activities at a hazardous material incident, and monitors the incident for compliance with Federal pollution laws.

**OPERATIONS** - The coordinated tactical response of all field operations in accordance with the Incident Action Plan.

**ORAL TOXICITY** - Adverse effects resulting from taking a substance into the body through the mouth.

**ORGANIC PEROXIDE** - Strong oxidizers, often chemically unstable, containing the -o-o- structure. They react readily with solvents or fuels resulting in an explosion or fire.

**OVERPACK** - An enclosure used to consolidate two or more packages of hazardous material. "Overpack" does not include a freight container.

**OXIDIZER** - A chemical, other than a blasting agent or explosive, that initiates or promotes combustion in other materials thereby causing fire either of itself or through the release of oxygen or other gases. (49 CFR 173.151)

**OXYGEN DEFICIENCY** - A concentration of oxygen insufficient to support life.

**OXYGEN DEFICIENT ATMOSPHERE** - An atmosphere that contains an oxygen content less than 19.5 % by volume at sea level.

**PACIFIC STRIKE TEAM** - The National Strike Force pollution control team equipped and trained to assist in responses to oil or chemical incidents occurring in the western United States and administered by the United States Coast Guard.

**PALLETS** - A low portable platform constructed of wood, metal, plastic, or fiberboard, built to specified dimensions, on which supplies are loaded, transported, or stored in units.

**PARTS PER BILLION (ppb)** - A unit for measuring the concentration of a particular substance equal to one (1) unit combined with 999,999,999 other units.

**PARTS PER MILLION (ppm)** - A unit for measuring the concentration of a particular substance equal to one (1) unit combined with 999,999 other units.

**PATHOGEN** - Any disease producing organism, including viruses.

**PCB CONTAMINATED ELECTRICAL EQUIPMENT** - Any electrical equipment, including transformers, that contains at least 50 ppm but less than 500 ppm of PCBs. (40 CFR 761.3)

**PCB ITEM** - An item containing PCBs at a concentration of 5 ppm or greater. (40 CFR 761.3)

**PCB TRANSFORMER** - Any transformer that contains 500 ppm of PCBs or greater. (40 CFR 761.3)

**PENETRATION** - The movement of liquid molecules through a chemical protective clothing, suit, garment or material.

**PERMEATION** - The movement of vapor or gas molecules through a chemical protective garment material.

**PERMEATION KITS** - Kits assembled for the purpose of testing on-site an unknown liquid substance for permeability of chemical protective clothing.

**PERMISSIBLE EXPOSURE LIMIT (PEL)** - The employees' permitted exposure limit to any material listed in Table Z-1, Z-2, or Z-3 of OSHA regulations, section 1910.1000, Air Contaminants.

**PERSISTENT TOXIC SUBSTANCE** - A material or waste that resists natural degradation or detoxification and may present long term health and environmental hazards.



**PERSONAL PROTECTIVE EQUIPMENT (PPE)** - Equipment provided to shield or isolate a person from the chemical, physical, and thermal hazards that may be encountered at a hazardous materials incident. Adequate personal protective equipment should protect the respiratory system, skin, eyes, face, hands, feet, head, body, and hearing. Personal protective equipment includes- personal protective clothing, self-contained positive pressure breathing apparatus, and air purifying respirators. (NFPA 472, 1-3)

**PESTICIDES** - A chemical or mixture of chemicals used to destroy, prevent, or control any living organism considered to be a pest.

**pH** - A numerical designation of the negative logarithm of hydrogen ion concentration. A pH of 7.0 is neutrality; higher values indicate alkalinity and lower values indicate acidity.

**PLUGGING AND PATCHING KITS** - Kits commercially available or privately assembled for the purpose of providing capabilities for emergency plugging and patching of leaking containers, pipes, and tanks.

**PLUME** - A vapor, liquid, dust, or gaseous cloud formation that has shape and buoyancy.

**PNEUMONITIS** - Inflammation of the lungs characterized by an outpouring of fluid in the lungs.

**POISON CONTROL CENTERS** - California is served by four certified and designated regional poison control centers. Each PCC is available 24 hours a day and can provide immediate health effects, scene management, victim decontamination, and other emergency medical treatment advice for hazardous materials emergencies. A physician specializing in medical toxicology is available for back-up consultation.

**POLLUTION** - Contamination of air, water, land, or other natural resources that will or is likely to create a public nuisance and cause health and environmental harm.

**POLYCHLORINATED BIPHENYL (PCB)** - One of several aromatic compounds containing two benzene nuclei with two or more chlorine atoms.

**POLYMERIZATION** - A chemical reaction, usually carried out with a catalyst, heat, or light, and often under high pressure, which generates high temperature and when uncontrolled may be violent.

**POST EMERGENCY RESPONSE** - That portion of an emergency response performed after the immediate threat of a release has been stabilized or eliminated and cleanup of the site has begun.

**POST-INCIDENT ANALYSIS** - The termination phase of an incident that includes completion of the required forms and documentation for conducting a critique.

**PRE-INCIDENT PLANNING** - The process associated with preparing for the response to a hazard by developing plans, identifying resources, conducting exercises, and other techniques to improve an agency's or organization's response capabilities.

**PREVENTION PLAN** - See California Accidental Release Prevention Program (CalARP).

**PRODUCT SUBSTITUTION** - Replacing a hazardous substance in a process with a less hazardous substance.

**PROPER SHIPPING NAME** - The DOT designated name for a commodity or material. (49 CFR 172.101)

**PROPOSITION 65** - California Safe Drinking Water Act of 1986.

**PROTECTIVE CLOTHING** - See Personal Protective Equipment (PPE).

**PULMONARY** - Pertaining to the lungs.

**PYROPHORIC** - A substance that ignites spontaneously in dry or moist air at or below 130o F. (49 CFR 173.115(c))

**QUALITATIVE FIT TEST** - A physical testing of a breathing apparatus face piece to the wearer, performed in an atmosphere of amyl acetate or irritant smoke to evaluate whether the wearer can detect the contaminant, indicating mask leakage and improper fit.

**RADIATION ABSORBED DOSE (RAD)** - A basic unit of absorbed dose of ionizing radiation.

**RADIOACTIVE** - The spontaneous disintegration of unstable nuclei accompanied by emission of nuclear radiation.

**RADIOACTIVE MATERIAL (RAM)** - Any material, or combination of materials, that spontaneously emits ionizing radiation and has a specific activity greater than 0.002 microcuries per gram. (49 CFR 173.389)

**RECORDER** - See Technical Specialist - Hazardous Materials Reference.

**RECOVERY DRUM** - See Disposal Drum.

**REFERENCE LIBRARY** - A selection of chemical textbooks, reference books, microfiche, and computer data programs typically carried by a hazardous materials response team.

**REGIONAL PLAN** - A hazardous material plan developed pursuant to SARA Title III.

**REGIONAL RESPONSE TEAM** - Composed of representatives of the Federal agencies and a representative from each State in the ten Federal EPA regions as specified in the NCP.

**REGIONAL WATER QUALITY CONTROL BOARD (RWQCB)** - This agency in conjunction with the State Water Resources Control Board (SWRCB) is charged with managing statewide water quality.

**RELEASE, THREATENED RELEASE** - The actual or potential spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment, including the abandonment or discarding of barrels, containers, and other closed receptacles of any hazardous material.

**REMEDIAL ACTION** - Actions taken to mitigate the effects of a release or threatened release of a hazardous material to protect health or the environment.

**REMOVAL ACTION** - See Mitigation.

**REPORTABLE INCIDENT** - Any incident that has or may impact the public health, safety or the environment, or is otherwise required by law to be reported.

**REPORTABLE QUANTITY (RQ)** - The designated amount of a specific material that if spilled or released requires immediate notification to the National Response Center (NRC). (49 CFR 172.101, 40 CFR 117.3, 173. and 302.6)

**RESCUE** - The removal of victims from an area determined to be contaminated or otherwise hazardous by appropriately trained and equipped personnel.

**RESIDUE** - A material remaining in a package after its contents have been emptied and before the packaging is refilled, or cleaned and purged of vapor to remove any potential hazard.

**RESOURCE CONSERVATION AND RECOVERY ACT (RCRA)** - The Federal framework for the proper management and disposal of hazardous wastes. This program is administered by EPA and may be delegated to the States.

**RESPIRATORY PROTECTIVE EQUIPMENT** - See SCBA and Air Purifying Respirators.

**RESPONSE** - That portion of incident management where personnel are involved in controlling a hazardous material incident. (NFPA 472, 1-3)

**RESPONSIBLE PARTY (RP)** - A legally recognized entity (person, corporation, business, or partnership, etc.) that has a legally recognized status of financial accountability and liability for action necessary to abate and mitigate adverse environmental and human health and safety impacts resulting from a non-permitted release or discharge of hazardous material; the person or agency found legally accountable for the cleanup of the incident.

**RISK ANALYSIS** - A process to analyze the probability that harm may occur to life, property, and the environment and to note the risks to be taken to identify the incident objectives.

**RISK MANAGEMENT** - Decision-making process which involves such considerations as risk assessment, technological feasibility, economic information about costs and benefits, statutory requirements, public concerns, and other factors.

**RISK MANAGEMENT PREVENTION PLAN (RMPP)** - This program has been replaced by the California Accidental Release Prevention Program (CalARP).

**ROENTGEN** - A measure of the charge produced in air created by ionizing radiation, usually in reference to gamma radiation.

**ROENTGEN EQUIVALENT MAN (REM)** - The unit of dose equivalent; takes into account the effectiveness of different types of radiation.

**RUPTURE** - The physical failure of a container or mechanical device, releasing or threatening to release a hazardous material.  
(Sacramento Fire Department HMRT)

**SAFETY OFFICER** - Selected by the Incident Commander, a person at an emergency incident responsible for assuring that all overall operations performed at the incident by all agencies present are done so with respect to the highest levels of safety and health. The Safety Officer shall report directly to the Incident Commander.

**SALVAGE DRUM** - See Recovery Drum.

**SAMPLE** - To take a representative portion of the material for evidence or analytical purposes.

**SARA TITLE III REGIONAL PLAN** - See Regional and Local Plan.

**SCBA** - See "Self Contained Breathing Apparatus".

**SCENARIO** - An outline of a natural or expected course of events.

**SCENE** - The location impacted or potentially impacted by a hazard.

**SECONDARY MATERIALS** - Spent materials, sludges, by-products, scrap metal and commercial chemical products recycled in ways that differ from their normal use.

**SELECTIVE TOXICITY** - The capacity of a chemical to injure one kind of living matter without harming another, even though the two may be in intimate contact.

**SELF CONTAINED BREATHING APPARATUS (SCBA)** - A positive pressure, self-contained breathing apparatus (SCBA) or combination SCBA/supplied air breathing apparatus certified by the National Institute for Occupational Safety and Health (NIOSH) and the Mine Safety and Health Administration (MSHA), or the appropriate approval agency for use in atmospheres that are immediately dangerous to life or health (IDLH). (NFPA 1991, 1-3)

**SENSITIZER** - A substance which on first exposure causes little or no reaction in humans or test animals, but which on repeated exposure may cause a marked response not necessarily limited to the contact site.

**SHELTERING IN PLACE/IN PLACE PROTECTION** - To direct people to quickly go inside a building and remain inside until the danger passes.

**SHIPPING PAPERS** - Generic term used to refer to documents that must accompany all shipments of goods for transportation. These include Uniform Hazardous Waste Manifests, Bills of Lading, Consists, etc. Shipping papers are intended to describe what hazardous materials are contained within the shipment, if any.

**SHORT TERM EXPOSURE LIMIT (STEL)** - See Threshold Limit Value –Short Term Exposure Limit (TLV-STEL).

**SITE** - Any facility or location within the scope of 8 CCR 5192(a)(3).

**SKIMMER** - Physical systems whereby a liquid phase is recovered from another liquid phase due to polarity differences and stored or transferred for further processing. Typical use is to remove petroleum products floating on a water body.

**SLUDGE** - Accumulated solids, semisolids, or liquid waste generated from wastewaters, drilling operations, or other fluids.

**SMOKE** - An air suspension (aerosol) of particles, often originating from combustion or sublimation.

**SOLIDIFICATION** - Process whereby a contaminant is permanently immobilized in a substrate to prevent future migration away from the container.

**SOLUBILITY** - The ability or tendency of one substance to blend uniformly with another.

**SOLVENTS** - A liquid substance capable of dissolving or dispersing one or more other substances to form a uniformly dispersed mixture.

**SPILL** - The release of a liquid, powder, or solid hazardous materials in a manner that poses a threat to air, water, ground, and to the environment.  
(See Incident)

**SPILLER** - See Responsible Party.

**SPONTANEOUSLY COMBUSTIBLE** - See Pyrophoric.

**STABILIZATION** - The period of an incident where the adverse behavior of the hazardous material is controlled. (NFPA 472, 1-3)

**STAGING AREA** - The area established for temporary location of available resources closer to the incident site to reduce response time.

**STATE WARNING CENTER, CALIFORNIA STATE WARNING CENTER, OES WARNING CENTER** - The Governor's Office of Emergency Services Warning Center facilitates emergency communications with government agencies at all levels. The California State Warning Center monitors seismic activity, weather and other conditions that could cause a disaster and is the central reporting office for any release or threatened release of a hazardous material. The California State Warning Center is the initial contact point in the state to initiate coordination and begin to mobilize federal, state and local agencies during a disaster.

**STORAGE** - Containment of hazardous materials on a temporary basis in such a manner as to not constitute disposal of such materials.

**STRICT LIABILITY** - The responsible party is liable even though they have exercised reasonable care.

**SUPERFUND AMENDMENTS & REAUTHORIZATION ACT (SARA)** - Created for the purpose of establishing Federal statutes for right-to-know standards, emergency response to hazardous materials incidents, re-authorized the Federal superfund, and mandated States to implement equivalent regulations/requirements.

**SUPPORT ZONE** - See Cold Zone.

**SURFACE IMPOUNDMENT** - A natural depression, human made excavation or diked area designed to hold an accumulation of liquid wastes or waste containing free liquids.

**SYNERGISTIC EFFECT** - The combined effect of two chemicals that is greater than the sum of the effect of each agent alone.

**SYSTEMIC** - Pertaining to the internal organs and structures of the body.

**SYSTEMIC TOXIC EXPOSURE** - Toxic effects to the body as a whole spreading via the bloodstream and often displaying delayed symptoms.

**TEAM LEADER** - See Entry Team Leader.

**TECHNICAL SPECIALIST -- HAZARDOUS MATERIALS REFERENCE** - Person assigned to document activities of the Hazardous Material Team and gather information relevant to the chemicals involved and their hazards.

**TERATOGEN** - A substance or agent that can result in malformations of a fetus.

**TERATOGENICITY** - Ability to produce birth defects.

**TERMINATION** - That portion of incident management where personnel are involved in documenting safety procedures, site operations, hazards faced, and lessons learned from the incident. Termination is divided into three phases- Debriefing, Post-Incident analysis, and Critique. (NFPA 472, 1-3) (See Post-Incident Analysis.)

**THIEVING ROD** - A glass rod used like a COLIWASSA, except the liquid is contained in the tube by a vacuum pressure.

**THRESHOLD** - The point where a physiological or toxicological effect begins to be produced by the smallest degree of stimulation.

**THRESHOLD LIMIT VALUE (TLV)** - The value for an airborne toxic material that is to be used as a guide in the control of health hazards and represents the concentration to which nearly all workers may be exposed 8 hours per day over extended periods of time without adverse effects.

**THRESHOLD LIMIT VALUE - CEILING (TLV-C)** - The concentration that should not be exceeded during any part of the working exposure.

**THRESHOLD LIMIT VALUE - TIME WEIGHTED AVERAGE (TLV-TWA)** - An exposure level under which most people can work consistently for 8 hours a day, day after day, with no harmful effects.

**THRESHOLD LIMIT VALUE SHORT TERM EXPOSURE LIMIT (TLV-STEL)** - A 15-minute time-weighted coverage exposure which should not be exceeded at any time during a work day, nor repeated more than 4 times per day, even if the 8-hour time-weighted average is within the Threshold Limit Value (TLV).

**THRESHOLD PLANNING QUANTITY (TPQ)** - The quantity designated for each extremely hazardous substance that triggers a required notification by facilities to the State emergency response commission that such facilities are subject to reporting under SARA Title III.

**TOTALLY ENCAPSULATED SUITS** - Special protective suits made of materials that prevent toxic or corrosive substances or vapors from coming in contact with the body. (See Fully Encapsulated Suit.)

**TOXIC** - Poisonous; relating to or caused by a toxin; able to cause injury by contact or systemic action to plants, animals or people.

**TOXIC CHEMICALS** - EPA uses this term for chemicals whose total emissions and releases must be reported annually by owners and operators of certain facilities that manufacture, process or otherwise use a listed toxic chemical as identified in SARA Title III.

**TOXICITY** - A relative property of a chemical agent that refers to its harmful effect on some biological mechanism and the conditions under which this effect occurs.

**TRAFFIC CONTROL/CROWD CONTROL** - Action(s) by law enforcement to secure and/or minimize exposure of the public to unsafe conditions resulting from emergency incidents, impediments and congestion.

**TREATMENT** - Any method, technique, or process which changes the physical, chemical, or biological character or composition of any hazardous waste, or removes or reduces its harmful properties or characteristics for any purpose.

**UNITED NATIONS (UN) IDENTIFICATION NUMBER** - When UN precedes a four-digit number, it indicates that this identification number is used internationally to identify a hazardous material.

**UPPER EXPLOSIVE LIMIT (UEL)** - The highest concentration of the material in air that can be detonated.

**UPWIND** - In or toward the direction from which the wind blows.

**VAPOR** - An air dispersion of molecules of a substance that is normally a liquid or solid at standard temperature and pressure.

**VAPOR DISPERSION** - The movement of vapor clouds in air due to turbulence, gravity, spreading, and mixing.

**VAPOR PROTECTIVE SUIT** - See Levels of Protection.

**VULNERABILITY** - The susceptibility of life, the environment, and/or property, to damage by a hazard.

**WARM ZONE** - The area where personnel and equipment decontamination and hot zone support takes place. It includes control points for the access corridor and thus assists in reducing the spread of contamination. This is also referred to as the "decontamination", "contamination reduction", "yellow zone", or "limited access zone" in other documents. (NFPA 472, 1-3)

**WATER REACTIVE** - Having properties of, when contacted by water, reacting violently, generating extreme heat, burning, exploding, or rapidly reacting to produce an ignitable, toxic, or corrosive mist, vapor, or gas.



## Glossary of Terms: Terrorism

**ACETYLCHOLINE** - A chemical neurotransmitter produced by nerve cells acting as a chemical “messenger” to stimulate the heart, skeletal muscles, and numerous secretory glands.

**ACETYLCHOLINESTERASE** - An enzyme that normally hydrolyzes the neurotransmitter acetylcholine, thereby stopping its activity, but can be inhibited by organophosphates, carbamates and certain other “nerve agents”.

**AEROBIC** - Capable of living and growing only in the presence of free oxygen.

**ANTHRAX** - A rod shaped aerobic bacteria *Bacillus Anthracis* that is spore producing and exists in three forms; The pulmonary form is usually 100 % lethal.

**ANTIBIOTIC** - A substance that inhibits the growth of or kills micro-organisms.

**ANTIPERSONNEL** - Agents those are effective directly against humans.

**ANTITOXIN** - A substance found or introduced into the blood serum or other body fluid that is specifically antagonistic to a toxin.

**ASEPTIC** - Free from infection.

**ATROPINE** - Therapeutic drug used as an antidote for nerve agents, is very effective in blocking the effects of excess acetylcholine.

**BACILLUS** - A rod-shaped bacterium.

**BACTERIA** - Single celled living microscopic organism varying in size from 0.5µm to 5 µm with a nucleus, intracellular structure, and a cell wall capable of duplicating itself through cell division. Some types of bacteria can transform into spores that may last for years or decades. Some types of bacteria can produce highly lethal toxins (*Botulinum*).

**BACTERIAL AGENT** - A pathogenic substance that can cause disease in humans and animals by means of two mechanisms; By invading living tissue or by producing poisonous toxins, or both.

**BIOLOGICAL AGENT** - Usually refers to all agents that may cause disease or death including bacteria, virus, and toxins.

**BIOLOGICAL TOXIN** - A chemical substance produced by a living organism, such as bacteria, plant, animal or insect, that by itself can be highly lethal, such as *botulinum* or *ricin*.

**BIOLOGICAL WARFARE** - The intentional use of biological agents as weapons to kill or injure humans, animals, or plants, or to damage equipment.

**BIOLOGICAL WARFARE AGENT** - Military use of living organisms or their toxins with the intent to cause death, disability, or damage to humans.

**BLISTER AGENT** - Substances that cause blistering and destruction of the skin through liquid or aerosol contact.

**BLOOD AGENT** - An antiquated military term implying that the site of action of cyanides is in the blood, but more accurately is described as an oxygen blocker for every cell in the body, beginning with the blood.

**BOTULISM** - Poisoning by botulinum toxin that is produced by the bacillus *Clostridium Botulinum* is anaerobic, and is usually 65% lethal.

**BRITISH ANTI-LEWISITE** - Therapeutic drug used as an antidote for Lewisite, is a heavy metal chelator, not often used, results are not guaranteed.

**CARDIAC** - Pertaining to the heart.

**CARRIER** - An individual who harbors specific disease organisms without showing symptoms, thus serving as a means of conveying infection.

**CELL** - A small mass of protoplasm, generally including a nucleus, surrounded by a semi-permeable membrane.

**CHEMICAL AGENT** - A chemical substance that is intended for use in military operations to kill, seriously injure, or incapacitate people through its physiological effects; See also *Chemical Warfare Agent*.

**CHEMICAL WARFARE AGENTS** - A chemical substance that is intended for use in military operations to kill, seriously injure or incapacitate, and are usually divided into 5 groups: Nerve, Blood, Respiratory (choking), Incapacitating, and Blister (vesicants).

**CHEMOTHERAPY** - The treatment of disease by chemicals that affect the causative organism unfavorably without seriously reacting on the patient.

**CHOKING AGENTS** - Substances that irritate, inflame, or cause physical injury to the tissues of the respiratory system, throat, nose and mouth.

**CHOLERA** - An acute infectious gastrointestinal disease with a mortality rate as high as 30%.

**COMMUNICABLE** - Capable of being transmitted from one individual to another.

**CONTAGIOUS** - Transmissible from one individual to another.

**CUTANEOUS** - Pertaining to the skin.

**CYANOGEN CHLORIDE (CK)** - A *blood agent* chemical warfare agent, causing almost immediate respiratory and cardiac failure within minutes of inhalation; Not as lethal as hydrogen cyanide.

**CYTOTOXIN** - A toxin that causes cellular destruction or interfere with metabolic processes, particularly with the respiratory and circulatory systems.

**DIARRHEA** - Abnormal frequency and liquidity of intestinal discharges.

**DIAZEPAM** - Therapeutic drug used as an antidote for nerve agents, is very effective as an anti-convulsant and to reduce brain damage.

**DISEASE** - Illness or sickness.

**DISINFECTANT** - An agent, usually chemical, that destroys infective agents.

**DISTILLED MUSTARD (HD)** - A *vesicant* chemical warfare agent used in WWI this sulfur mustard causes severe dermal and eye destruction and burns; is an oily liquid with a garlic odor.

**ENCEPHALITIS** - Inflammation of the brain.

**EDEMA** - Excessive accumulation of fluid in body tissue or body cavities.

**ENDEMIC** - Native to or prevalent in a particular district or region; having a low incidence but is constantly present in a given community or environment.

**ENDOTOXIN** - A toxin that is produced within a micro-organism and retained within the cell until it disintegrates.

**EPIDEMIC** - An outbreak of disease that spreads rapidly and attacks many individuals in the same region at the same time.

**ERYTHEMA** - Reddening of skin resembling a good case of sunburn; Typical of moderate exposure to *Mustard Substances* and *Lewisite*.

**EXOTOXIN** - A toxin excreted by a living organism.

**H** = Refers to a Levinstein mustard, a series of persistent blister agents that include distilled mustard (HD), and the nitrogen mustards (HN-1, HN-2, and HN-3).

**HYDROCYANIC ACID (AC)** - A *blood agent* chemical warfare agent causing almost immediate respiratory and cardiac failure within minutes of inhalation; Most lethal of the cyanides; Also known as hydrogen cyanide.

**INCAPACITATING AGENTS** - A group of chemical warfare agents intended to incapacitate rather than injure or kill, by causing severe eye and nasal distress and irritation; Popular with law enforcement for riot control; Examples are Mace and Pepper Spray.

**INFECTION** - Invasion of body tissues by organisms, usually pathogenic, which multiply and cause disease.

**INFECTIOUS DISEASE** - One that is caused by a living agent, such as bacteria, protozoa, virus, or fungi, and may or may not be contagious.

**INVASIVENESS** - The ability of a micro-organism to enter the body and spread throughout the tissues.

**INTOXICATION** - Poisoning.

**INTRAVENOUS** - Within the vein.

**LACRIMATOR** - A compound that causes a large flow of tears and irritates the skin; A Tearing Agent.

**LETHAL AGENTS** - Biological or chemical agents that could cause significant human mortality.

**LEWISITE (L)** - A *vesicant* chemical warfare agent used in WWI as a gas or aerosol, causes moderate to severe dermal and eye destruction and burns, heavily used but not totally successful, was considered a minor military threat.

**MALaise** - A feeling of bodily discomfort.

**MARK I** - Military kit containing antidotes Atropine and Prolidoxime Chloride.

**MACE<sup>®</sup> (CN)** - An *incapacitating* agent “chloroacetophenone” popular with law enforcement and military to render recipient temporarily incapable of resistance or flight. Less popular than stronger military formulation CS.

**MALaise** - A vague feeling of bodily discomfort.

**MICRO-ORGANISM** - Any organism, such as bacteria, viruses, and some fungi, that can be seen only with a microscope.

**MIOSIS** - Excessive contraction of the pupil.

**MUSTARD (H)** - A *vesicant* chemical warfare agent used in WWI as a gas or aerosol, causes severe dermal and eye destruction and burns. The term “mustard” usually refers to “sulfur mustard”; the more pure distilled mustard is referred to as “distilled mustard”.

**MUSTARGEN** - A *vesicant* chemical warfare agent used in WWI as a gas or aerosol, is HN2 derivative of nitrogen mustard and the most popular during WWI.

**MYCOTOXIN** - A toxin produced by fungi.

**NAUSEA** - Tendency to vomit; sickness of the stomach.

**NECROSIS** - Death of a cell or group of cells in contact with living tissue.

**NEURAL** - Relating or pertaining to the nerves.

**NEUROTOXIN** - A substance that is poisonous or destructive to nerve tissue.

**NERVE AGENT** - Substances that interfere with the central nervous system primarily through liquid contact (skin) and lesser so through aerosol (lungs).

**NEUROTOXINS** - Toxins that interfere with nerve impulses and may affect the central nervous system; Tend to act rapidly.

**NITROGEN MUSTARD (HN)** - A *vesicant* chemical warfare agent synthesized during WWI, there are three derivatives, HN1, HN2, and HN3.

**NONPERSISTENT AGENT** - An agent that upon release loses its ability to cause casualties after 10 to 15 minutes, typical of most incapacitating agents.

**NUCLEUS** - A body within a cell that is the center of reproductive activities of the cell.

**ORGANO-PHOSPHATE** - A phosphate containing organic compound that inhibit cholinesterase enzymes.

**2-PAM CHLORIDE** - Used in treatment of nerve agent poisoning.

**PATHOGENIC** - Causing disease.

**PATHOGEN** - Any disease producing micro-organism or material, which includes virus, bacteria, rickettsia, fungi and mycoplasma.

**PERCUTANEOUS AGENT** - Able to be absorbed by the body through the skin.

**PERSISTENT AGENT** - An agent that upon release retains its casualty producing effects for an extended period of time, usually from 30 minutes to several days; A substance usually having a low evaporation rate and its vapor is heavier than air.

**PHOSGENE** - A *respiratory agent* chemical warfare agent used in WWI as a gas, causes severe upper respiratory distress and edema as it hydrolyses to hydrochloric acid.

**PHOSGENE OXIME** - A *vesicant* chemical warfare agent, not popular, little used, was a minor military threat, is highly corrosive and a irritant.

**PHYTOTOXIN** - A toxin derived from a plant, such as ricin.

**PLAGUE** - Or "Black Death", is an aerobic bacterium *Yersinia Pestis* and occurs in three clinical forms; Pneumonic that can be 90% lethal, Septicemic, and Bubonic, which is the most common and may be 30% lethal; Pneumonic is highly contagious.

**RESPIRATORY AGENT** - Also referred to as pulmonary agents, a reference to chemical agents that attack the mucous membranes of the respiratory tract causing severe pain and edema; Chlorine, phosgene and oxides of nitrogen are examples.

**RICIN** - A poisonous toxin distilled from the seed of the castor oil plant.

**RIOT CONTROL AGENT** - An incapacitating agent intended to temporarily render a person inoperative by causing extreme distress and pain, but is not lethal; Examples are CN (MACE) and CS.

**SARIN (GB)** - A nerve agent developed by the Germans during WWII that has an LC<sub>50</sub> skin dose of 100-200 mg.

**SEPTIC** - Produced by or due to putrefaction or morbid germs.

**SOMAN (GD)** - A nerve agent developed by the Germans during WWII that has an LC<sub>50</sub> skin dose of 50-70 mg.

**SPORES** - A bacteria cell with a hardened shell that is more resistant to cold, heat, drying, chemicals and radiation than the bacterium itself, and may lie dormant for decades; They germinate when conditions are favorable and transform into bacteria cells.

**SULFUR MUSTARD (H)** - A *vesicant* chemical warfare agent synthesized during WWI, there are two derivatives H, and HD. See also "Mustard".

**SYMPTOMS** - Functional evidence of disease or of conditions, or a change in conditions that indicate a mental or bodily state.

**TABUN (GA)** - A nerve agent developed by the Germans during WWII that has an LC<sub>50</sub> skin dose of 200-400 mg.

**TEAR AGENT** - An incapacitating agent that produces irritating or disabling effects that rapidly disappear within minutes after exposure; A Lacrimator.

**TERRORISM** - The unlawful use of force against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in the furtherance of political or social objectives.

**TOXIC** - Poisonous and perhaps deadly depending on the dose and resistance of the individual.

**TOXICITY** - The quality of being poisonous depending on the potency of the toxin.

**TOXIN** - A chemical substance that is a product of a living organism, - plant, animal or bacteria, - which produce adverse or lethal effects on humans and animals; True toxins are protein like, more or less unstable particularly on contact with air, and require a short incubation or latent period to produce symptoms.

**TRANSMISSIBLE AGENT** - Pathogens that can spread disease from person to person.

**V AGENTS** - Persistent, highly toxic nerve agents developed in mid 1950's and absorbed primarily through the skin; An example is VX with a skin  $LC_{50}$  dose of 10-50 mg.

**VACCINE** - A preparation of killed or attenuated infective toxic agent used as an inoculation to produce active artificial immunity.

**VESICANT** - A vapor or liquid chemical threat to dermal and eyes intended to cause severe burns and blistering with delayed effects appearing hours after contact. Prolong exposure causes bone marrow damage. There are no acceptable and reliable antidotes.

**VIABLE** - Capable of living.

**VIRAL AGENT** - A virus organism that brings about changes in healthy hosts cell such that the hosts cell usually dies.

**VIRULENCE** - Refers to the relative infectiousness of an organism or its ability to overcome the defenses of the host.

**VIRUS** - Extremely small submicroscopic agents from 0.02 $\mu$ m to 0.2 $\mu$ m with a nucleocapsid protein coat or lipid/glycoprotein coat, containing genetic RNA or DNA material, but not having a nucleus and incapable of duplicating itself through cell division; Invades a host cell and takes over the nucleus in order to replicate.

**VOMITING AGENT** - An incapacitating agent that encourages uncontrolled vomiting, nausea, coughing, sneezing, tearing, and pain to the affected areas, but rarely causes death.